## Received Office of Oil & Gas

OCT 3 0 2014

Pm

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WR-35 Rev. 8/23/13

# State of West Virginia Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

API	47 - 043	_ 03450	County LINCO	OLN	District_DUVAL	
	GRIFFITHSVI		Pad Name AU	STIN GRIFFITH	Field/Pool Name	GRIFFITHSVILLE
	<sub>name</sub> ALLEN, T				Well Number 102	
Opera	tor (as registered	with the OOG)	H.G. ENERGY I	LC		
Addre	5260 DuPC	NT ROAD	City P	ARKERSBURG	State WV	Zip 26101
As Dr	Landing Point	Top hole 1 of Curve N	Attach an as-dr Northing 4,231,276 M Jorthing 4,231,175 M		, and deviation survey Easting 415,926 M Easting 415,827 M	
Eleva	tion (ft) 861'	GL	Type of Wel	l ■New □ Existing	Type of Repor	t □Interim <b>B</b> Final
Permi	t Type 🗆 De	viated   Ho	orizontal 🗆 Horiz	contal 6A 📱 Vertica	al Depth Type	□ Deep <b>■</b> Shallow
Туре	of Operation 🗆	Convert 🗆 D	eepen 📱 Drill	□ Plug Back □ R	edrilling   Rework	□ Stimulate
Well	Type □ Brine D	isposal □ CBM	□ Gas □ Oil ■ S	Secondary Recovery	□ Solution Mining □ S	torage   Other
	of Completion ■ d with □ Cable		tiple Fluids Pro	duced 🗆 Brine 🗆 🗅 C	Gas □ NGL ■ Oil	□ Other
Drilli	ng Media Surfa	ce hole 🗂 Air	□ Mud ■Fresh V	Water Intermedi	ate hole ■ Air □ Mu	d ■ Fresh Water □ Brine
Produ	ction hole 📱 Ai	r □ Mud □	Fresh Water 📱 Bı	rine		
Mud N/A	Type(s) and Add	itive(s)				
Date o	permit issued completion activi	ties began	9/29/14		14 Date drilling activities ceased Granted by	10/1/14
Please	e note: Operator	is required to su	bmit a plugging app	lication within 5 days	of verbal permission to	plug
Fresh	water depth(s) ft		320'	Open mine(s) (Y/	N) depths	N
Salt w	ater depth(s) ft_	1010	', 1300'	Void(s) encounter	red (Y/N) depths	N
Coal o	depth(s) ft	438'-	445'	Cavern(s) encount	tered (Y/N) depths	N
Is coa	l being mined in	area (Y/N)	N			Reviewed by:

## Received Office of Oil & Gas

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Rev. 8/23/13									
API 47- 043	03450	Farm n	ame_ALLEN,	TERRY &	DAWNA	We	ll number_10	12	
CASING	Hole	Casing		New or	Grade		Basket	Did cer	nent circulate (Y/ N)
STRINGS	Size	Size	Depth	Used	wt/ft		Depth(s)		ide details below*
Conductor	12 1/4"	11 5/8"	30'	Used	l	LS			Sand In
Surface	8 3/4"	7"	549'	New		LS	84'		<u>Y</u>
Coal									
Intermediate 1								$\perp$	
Intermediate 2									
Intermediate 3							,		
Production	6 1/4"	4 1/2"	2579.75'	New	J	J-55			Υ
Tubing				<u> </u>					<u> </u>
Packer type and de	epth set					_			
Comment Details	Circulated Est. 25	sks to surface on 7" su	rface cement job. Circ	culated Est. 7 sks	to surface on	4 1/2" cement	job.		
CEMENT DATA	Class/Type of Cement	Numb of Sacl			Yield t <sup>3</sup> /sks)	Volume (ft <sup>2</sup> )	e Cen Top (	nent (MD)	WOC (hrs)
Conductor									
Surface	Reg Neat	130	15.6	6	1.18	153	Sur	face	8
Coal									
Intermediate 1			.=						
Intermediate 2									
Intermediate 3									
Production	50:50 Pozm	ix 90/12	5 13.2/1	4.2 1.6	64/1.27	149/15	9 1	57'	8
Tubing									
Drillers TD (ft	2600'			Loggers T	D (ft) 260	)2'			T.
•	tion penetrated	Berea		Plug back					
Plug back pro	ocedure N/A	<u> </u>				-			
Kick off depth	ı (ft) 650'								
Check all wire	line logs run	■ caliper ■ neutron	■ density ■ resistivity		ed/directi a ray		induction temperature	□soni	ic
Well cored	Yes No	Conventi	onal Side	wall	W	ere cutting	gs collected	■ Yes	□ No
DESCRIBE T	HE CENTRAL	IZER PLACEM	ENT USED FO	OR EACH C	ASING S	TRING			
		alizer placed mid string on 7"							
WAS WELL (	COMPLETED	AS SHOT HOL	E □Yes ■	No Di	ETAILS				
WAS WELL O	COMPLETED	OPEN HOLE?	□ Yes ■ N	lo DET	AILS _				
WERE TRAC	ERS USED [	Yes A No	TYPE OF T	RACER(S)	USED _				

WR-35 Rev. 8/23/13		
API 47- 043 _ 03450	Farm name ALLEN, TERRY & DAWNA	Well number_102

Page 3	of 4

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	10/1/14	2386'	2400'	84	Berea
	-				
<u></u>					

Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	10/1/14	4.4	988	1205	826		39	12 bbls HCL
								_
			-					
					_			
				<del> </del>		<u> </u>		
					<del></del>	-		-
-								
L				Received	<del></del>	.L		

Please insert additional pages as applicable.

Office of Oil & Gas

WR-35 Rev. 8/23/13

API 47- 043	_ 03450	Farm :	name_ALLEN,	TERRY 8	DAWNA	Well 1	number 102		<u> </u>	<del></del>
PRODUCING 1	FORMATION(	<u>s)</u> _	<u>DEPTHS</u>					_		
Berea			2332'- 2352'	TVD	2382'- 2400'	MD	•		ceived	
							Of	rice of	f Oil &	Gas
								OCT 3	<b>3 0</b> 2014	
Please insert ad	ditional pages a	s applicable.		<del></del>						
GAS TEST	□ Build up □	Drawdown	□ Open Flow		OIL TEST C	Flow	⊐ Pump			
SHUT-IN PRE	SSURE Surf	ace	_psi Botto	m Hole	psi	DURA?	TION OF TE	ST	hrs	
OPEN FLOW	Gas	Oil	NGL		Water	GASN	MEASURED	RV		
012.1120.11			bpd				mated $\Box$ Or		⊐ Pilot	
				_						
LITHOLOGY/	TOP	BOTTOM	TOP	воттом	Ī					
FORMATION	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	DEPTH IN	FT DESCRIB	E ROCK TY	PE AND RECO	RD QUAN	TITYAND	
	NAME TVD	TVD	MD	MD	TYPE OF	FLUID (FRE	SHWATER, BR	INE, OIL,	GAS, H <sub>2</sub> S, 1	ETC)
Sand/Shale	0	438	0	438						
Pittsburgh Coal	438	445	438	445		-			-	
Sand/Shale	445	1610	445	1638						
Big Lime	1610	1820	1638	1852						
Big Injun	1820	1918	1852	1961					_	
Shale	1918	2312	1961	2362					_	
Coffee Shale	2312	2332	2362	2382						
Berea	2332	2352	2382	2404						
Shale	2352	2505	2404	2560						
TD	2505		2560			Drilled dire	ctional S 47° W	a distance	of 409'	
									<u>.</u>	
Diama in and a d	1:2:									
Please insert ad	ditional pages a	is applicable.								
<b>Drilling Contra</b>	ctor Decker Dril	ling								
Address 11565	State Route 676		City	Vincent		State	OH Zij	45784		
	\A/a ath a efore	d lata-satis-sal							:	
Logging Comp	any Weatherford	International		10/22422		_	1407	00450		
Address 777 No	TIN RIVER AVENUE		City	Weston	•	State	WV Zip	26452		
Cementing Cor	npany Universal	Services								
Address 5252 R	t 1428		City	Allen		State	KY 7in	41601		
						5141.0		·		
Stimulating Co.		ers Service Co	rp.		<del>_</del>				•	
Address 109 So	uth Graham Street		City	Zanesville		State	OH Zip	43701		
Please insert ad	ditional pages a	s applicable.								
Completed by	Roger Heldman	1			Telephor	ne 304-420	0-1107			
Signature	Kr lu	4 -	Title O	perations ma			Date 10/15/14	ı		
	7								<del></del>	
Submittal of Hy	draulic Fractur	ing Chemical I	Disclosure Info	rmation	Attach copy	of FRACE	FOCUS Regis	stry		

## **HG Energy, LLC**

Lincoln County, West Virgina Austin Griffith #102 Austin Griffith #102

Wellbore #1

Survey: MWD

## **Survey Report - Geographic**

15 October, 2014

Received Office of Oil & Gas



## DDC

## Survey Report - Geographic



Company:

HG Energy, LLC

Project:

Lincoln County, West Virgina

Site:

Austin Griffith #102 Austin Griffith #102

Well:

Wellbore: Design:

Wellbore #1 Wellbore #1 Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well Austin Griffith #102

WELL @ 869.0usft (Decker #9) WELL @ 869.0usft (Decker #9)

Minimum Curvature

EDM 5000.1 Single User Db

Project

Lincoln County, West Virgina

Map System:

Universal Transverse Mercator NAD83 West Virginia - HARN

Geo Datum: Map Zone:

Zone 17N (84 W to 78 W)

System Datum:

Mean Sea Level

Site

Well

Austin Griffith #102

Site Position:

Lat/Long

Northing: Easting:

13,882,076.02 usft 1,364,544.39 usft

Latitude: Longitude:

38° 13' 31.600 N 81° 57' 38.400 W

From: **Position Uncertainty:** 

0.0 usft

Slot Radius:

13-3/16 "

**Grid Convergence:** 

-0.59 °

Austin Griffith #102

**Well Position** 

+N/-S +E/-W 0.0 usft 0.0 usft Northing:

13.882.076.01 usfl 1,364,544.39 usfl Latitude:

38° 13' 31.600 N

**Position Uncertainty** 

0.0 usft

Easting:

0.0 usfl

Longitude:

81° 57' 38.400 W

**IGRF2010** 

Wellhead Elevation:

9/10/2014

Ground Level:

861.0 usfl

Wellbore

Wellbore #1

Magnetics

**Model Name** 

Sample Date

Declination (°)

Dip Angle (°)

Field Strength (nT)

226.50

51,843

Design

Wellbore #1

**Audit Notes:** 

Version:

Phase:

Depth From (TVD)

(usft)

**ACTUAL** 

0.0

Tie On Depth:

0.0

Vertical Section:

1.0

0.0

-7.43

+E/-W

Direction

66.09

+N/-S (usft) (°) (usft) 0.0

Survey Program From

(usft)

To

(usft)

Date 9/30/2014

Survey (Wellbore)

**Tool Name** 

Description

650.0

10/15/2014 3:50:57PM

2,563.0 MWD (Wellbore #1)

MWD default

MWD - Standard

Survey

ľ	Survey									
	Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
200	0.0 650.0		0.00	0.0 650.0	0.0 0.0	0.0 0.0	13,882,076.01 13,882,076.01	1,364,544.39 1,364,544.39	38° 13' 31.600 N 38° 13' 31.600 N	81° 57' 38.400 W 81° 57' 38.400 W
	685.0 715.0 745.0 775.0 805.0 835.0 865.0	0.80 0.70 2.10 3.80 5.80 7.30	136.60 147.40 197.20 227.20 236.90 241.90 237.50 231.70	685.0 715.0 745.0 775.0 804.9 834.8 864.6 894.4	-0.2 -0.6 -0.9 -1.5 -2.4 -3.7 -5.4 -7.8	0.2 0.5 0.6 0.1 -1.1 -3.3 -6.2 -9.5	13,882,075.78 13,882,075.42 13,882,075.07 13,882,074.52 13,882,073.60 13,882,072.34 13,882,070.61 13,882,068.26	1,364,544.60 1,364,544.89 1,364,544.95 1,364,544.49 1,364,543.26 1,364,541.09 1,364,538.14 1,364,534.85	38° 13' 31.598 N 38° 13' 31.594 N 38° 13' 31.591 N 38° 13' 31.585 N 38° 13' 31.576 N 38° 13' 31.563 N 38° 13' 31.546 N 38° 13' 31.522 N	81° 57' 38.397 W 81° 57' 38.394 W 81° 57' 38.393 W 81° 57' 38.399 W 81° 57' 38.414 W 81° 57' 38.441 W 81° 57' 38.478 W 81° 57' 38.518 W

Received

## DDC

## Survey Report - Geographic



Company: Project:

HG Energy, LLC

Lincoln County, West Virgina

Site: Well: Austin Griffith #102

Austin Griffith #102 Wellbore: Wellbore #1 Wellbore #1 Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Database:

Well Austin Griffith #102

WELL @ 869.0usft (Decker #9) WELL @ 869.0usft (Decker #9)

Grid

Minimum Curvature

EDM 5000.1 Single User Db

sign:	Wellbore #	<b>‡</b> 1			Database				
irvey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
955.0	10.80	221.30	953.5	-14.4	-16.8	13,882,061.60	1,364,527.62	38° 13' 31.456 N	81° 57' 38.608
985.0		226.80	983.0	-18.7	-20.9	13,882,057.34	1,364,523.47	38° 13′ 31.413 N	81° 57' 38.660
1,015.0		229.70	1,012.2	-23.1	-25.9	13,882,052.90	1,364,518.49	38° 13' 31.369 N	81° 57' 38.722
1,045.0		232.10	1,041.3	-27.7	-31.6	13,882,048.27	1,364,512.78	38° 13' 31.322 N	81° 57' 38.793
1,075.0		232.80	1,070.2	-32.5	-37.9	13,882,043.46	1,364,506.52	38° 13' 31.274 N	81° 57' 38.870 81° 57' 38.952
1,105.0		233.40	1,099.1	-37.5	-44.5	13,882,038.51	1,364,499.93	38° 13' 31.225 N	81° 57' 39.036
1,135.0		231.30	1,127.9	-42.7	-51.1	13,882,033.35	1,364,493.24	38° 13' 31.173 N	81° 57' 39.030
1,165.0	16.80	229.30	1,156.6	-48.1	-57.8	13,882,027.86	1,364,486.63	38° 13' 31.118 N	81° 57' 39.110
1,195.0		225.40	1,185.3	-54.0	-64.1	13,882,021.97	1,364,480.24	38° 13' 31.059 N 38° 13' 30.996 N	81° 57' 39.274
1,225.0	17.60	223.40	1,214.0	-60.4	-70.4	13,882,015.62	1,364,474.02	38° 13' 30.929 N	81° 57' 39.352
1,255.0	17.80	223.50	1,242.5	-67.0	-76.6	13,882,008.99	1,364,467.75	38° 13' 30.863 N	81° 57' 39.428
1,285.0	17.40	221.90	1,271.1	-73.7	-82.8	13,882,002.33	1,364,461.59	38° 13' 30.796 N	81° 57' 39.499
1,315.0			1,299.8	-80.4	-88.5	13,881,995.59	1,364,455.87	38° 13' 30.728 N	81° 57' 39.568
1,345.0			1,328.5	-87.2	-94.1	13,881,988.83	1,364,450.29 1,364,444.36	38° 13' 30.662 N	81° 57' 39.642
1,375.0			1,357.1	-93.8	-100.0	13,881,982.16	1,364,438.11	38° 13' 30.596 N	81° 57' 39.719
1,405.0			1,385.7	-100.4	-106.3	13,881,975.59 13,881,969.18	1,364,431.83	38° 13' 30.532 N	81° 57' 39.797
1,435.0			1,414.4	-106.8	-112.6	13,881,963.07	1,364,425.79	38° 13' 30.471 N	81° 57' 39.872
1,465.0			1,443.1	-112.9	-118.6 -124.5	13,881,957.13	1,364,419.89	38° 13' 30.412 N	81° 57' 39.945
1,495.0			1,471.9	-118.9	-130.4	13,881,951.10	1,364,413.98	38° 13' 30.351 N	81° 57' 40.018
1,525.0			1,500.7	-124.9 -130.9	-136.5	13,881,945.14	1,364,407.86	38° 13' 30.292 N	81° 57' 40.094
1,555.0			1,529.5	-136.4	-142.7	13,881,939.60	1,364,401.72	38° 13' 30.236 N	81° 57' 40.171
1,585.0			1,558.3 1,587.3	-141.6	-148.5	13,881,934.44	1,364,395.88	38° 13' 30.185 N	81° 57' 40.243
1,615.0			1,616.3	-141.8	-154.1	13,881,929.24	1,364,390.26	38° 13' 30.133 N	81° 57' 40.313
1,645.0			1,645.2	-152.3	-159.9	13,881,923.69	1,364,384.47	38° 13' 30.077 N	81° 57' 40.38
1,675.0 1,705.0			1,673.9	-158.2	-166.3	13,881,917.84	1,364,378.04	38° 13' 30.019 N	81° 57' 40.465
1,735.0				-164.3	-173.2	13,881,911.68	1,364,371.21	38° 13' 29.957 N	81° 57' 40.549
1,765.0			1,731.0	-170.6	-180.1	13,881,905.41	1,364,364.32	38° 13' 29.895 N	81° 57' 40.63
1,795.			*//	-176.8	-186.9	13,881,899.16	1,364,357.47	38° 13' 29.832 N	81° 57' 40.720
1,825.0				-183.0	-193.8	13,881,892.99	1,364,350.62	38° 13' 29.770 N	81° 57' 40.80
1,855.0				-189.0	-200.5	13,881,886.96	1,364,343.88	38° 13' 29.710 N	81° 57' 40.88
1,885.				-194.8	-206.9	13,881,881.19	1,364,337.51	38° 13' 29.652 N	81° 57' 40.96
1,915.			1,874.3	-200.3	-212.7	13,881,875.72	1,364,331.65	38° 13' 29.598 N	81° 57' 41.04
1,945.			1,903.3	-205.5	-218.1	13,881,870.46	1,364,326.25	38° 13' 29.545 N	81° 57' 41.10
1,975.		223.70	1,932.5	-210.6	-223.2	13,881,865.40	1,364,321.23	38° 13' 29.495 N	81° 57' 41.17
2,005.		222.00	1,961.7	-215.5	-227.7	13,881,860.49	1,364,316.67	38° 13' 29.446 N	81° 57' 41.22
2,035.				-220.2	-232.1	13,881,855.83	1,364,312.34	38° 13' 29.399 N	81° 57' 41.28
2,065.				-224.6	-236.2	13,881,851.45	1,364,308.19	38° 13' 29.355 N	81° 57' 41.33 81° 57' 41.37
2,095.				-228.7	-239.9	13,881,847.32	1,364,304.46	38° 13' 29.314 N 38° 13' 29.274 N	81° 57' 41.41
2,125.				-232.7	-243.3	13,881,843.27	1,364,301.10	38° 13' 29.234 N	81° 57' 41.45
2,155.				-236.7	-246.4		1,364,297.99	38° 13' 29.197 N	81° 57' 41.49
2,185.				-240.4	-249.3	13,881,835.60	1,364,295.13 1,364,292.21	38° 13' 29.163 N	81° 57' 41.52
2,215.				-243.8	-252.2		1,364,288.67	38° 13' 29.129 N	81° 57' 41.57
2,245.				-247.3 -250.8	-255.7 -260.1	13,881,828.75 13,881,825.16	1,364,284.25	38° 13' 29.093 N	81° 57' 41.62
2,275.				-254.6	-265.2		1,364,279.24	38° 13' 29.056 N	81° 57' 41.69
2,305.				-254.0	-270.4		1,364,274.01	38° 13' 29.019 N	81° 57' 41.75
2,335.				-262.2	-276.0		1,364,268.41	38° 13' 28.979 N	81° 57' 41.82
2,365.				-266.6	-270.0 -282.1	13,881,809.45	1,364,262.28	38° 13' 28.935 N	81° 57' 41.90
2,395. 2,425.				-270.9	-288.2		1,364,256.22	38° 13' 28.892 N	81° 57' 41.97
2,425. 2,455.				-275.1	-293.8		1,364,250.63	38° 13' 28.850 N	81° 57' 42.04
2,485.				-279.0	-298.8		1,364,245.58	38° 13' 28.810 N	81° 57' 42.10
2,508.				-281.9	-302.3		1,364,242.06	38° 13' 28.781 N	81° 57' 42.15
2,563.				-288.6	-310.5		1,364,233.87	38° 13' 28.714 N	81° 57' 42.25
	2563' MD / 2								

### DDC

## Survey Report - Geographic



Company: Project:

Design:

HG Energy, LLC

Lincoln County, West Virgina

Site: Well: Wellbore: Austin Griffith #102 Austin Griffith #102

Wellbore #1 Wellbore #1

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

**Survey Calculation Method:** 

Database:

Well Austin Griffith #102

WELL @ 869.0usft (Decker #9) WELL @ 869.0usft (Decker #9)

Grid

Minimum Curvature

EDM 5000.1 Single User Db

Survey	Anno	tations
--------	------	---------

Survey Ai	Measured	Vertical	Local Coor	dinates		
	Depth (usft)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment	
	650.0 2,563.0	650.0 2,508.3	0.0 -288.6	0.0 -310.5	FIRST SURVEY @ 650' MD / 650' TVD TD @ 2563' MD / 2508' TVD	

Checked By:	Approved By:	Date:
1 Ollookou 2).	A THE RESERVE OF THE PARTY OF T	

Received Office of Oil & Gas

Prepared for:		The same of the sa			Prepared by:	
HG Energy					Producers Ser	vice Corp
						vice corp
Dustin Hendershot					Chris Bryan	
304 481 7342		PRODUCERS			109 S. Grahan	St.
		SERVICE CORP.			Zanesville, OH	I 43702
					740-454-6253	
INVOICE #:	17450					
WELL NAME:	A Griffith #102					
STATE & COUNTY:	Lincoln,WV					
TOWNSHIP/FIELD:	Griffthsville					
DATE of SERVICE:	10/1/2014					
CUSTOMER PO#	*					
Description		Notes	Amount	Units	Unit Cost	Total Cost
ACID PUMP CHARGE			1	EA	\$	
MILEAGE CHARGE P	ER UNIT ONE WAY	1 Unit @ 50 Miles	50	MI	\$	
IC ACID 15% ACID DELIVERY			500		\$	
PRO HIB II			0.5		\$	
PRO CLA FIRM LP			0.5		\$	
PRO NE-1			0.5		\$	
PRO PEN			1		\$	
DATA VAN	<u> </u>		1	STAGE	\$	
	1					
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WR-35 Rev. 8/23/13

# State of West Virginia Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

API 47 - 043 _ 03451 County LINCOLN	District DUVAL	
Quad GRIFFITHSVILLE 7.5' Pad Name AUSTI		ISVILLE
Farm name ALLEN, TERRY & DAWNA	Well Number 103	
Operator (as registered with the OOG) H.G. ENERGY LLC		
Address 5260 DuPONT ROAD City PAR	KERSBURG State WV Zip	26101
As Drilled location NAD 83/UTM Attach an as-drilled Top hole Northing 4,231,280 M  Landing Point of Curve Northing Bottom Hole Northing	Easting	
Elevation (ft) 861' GL Type of Well	New □ Existing Type of Report □Interim	Final
Permit Type   Deviated   Horizontal   Horizontal	ıl 6A ■ Vertical Depth Type □ Deep	Shallow
Type of Operation □ Convert □ Deepen ■ Drill □ I	Plug Back   Redrilling   Rework   Stimu	late
Well Type □ Brine Disposal □ CBM □ Gas □ Oil ■ Seco	ndary Recovery   Solution Mining   Storage	Other
Type of Completion ■ Single □ Multiple Fluids Produce  Drilled with □ Cable ■ Rotary	ed □ Brine □Gas □ NGL ■ Oil □ Other	_
Drilling Media Surface hole ■ Air □ Mud ■ Fresh Water	r Intermediate hole ■ Air □ Mud ■ Fresl	n Water □ Brine
Production hole $\blacksquare$ Air $\square$ Mud $\square$ Fresh Water $\blacksquare$ Brine		
Mud Type(s) and Additive(s)  N/A		
Date permit issued5/31/2013 Date drilling common 7/28/14	enced7/10/14 Date drilling ceased	
Verbal plugging (Y/N)N Date permission granted	Granted by	
Please note: Operator is required to submit a plugging applicat	ion within 5 days of verbal permission to plug	¥
Freshwater depth(s) ft 320'	Open mine(s) (Y/N) depths	
Salt water depth(s) ft1010', 1300'	Void(s) encountered (Y/N) depths	V
	Cavern(s) encountered (Y/N) depths	N
Is coal being mined in area (Y/N)N	Rev	iewed by:

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OCT 3 0 2014

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100.0/23/13									
API 47- 043	03451	Farm na	ame_ALLEN, T	ERRY & I	DAWNA	Well	number_10	)3	
CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade 'wt/ft		Basket Depth(s)		nent circulate (Y/ N) de details below*
Conductor	12 1/4"	11 5/8"	30'	Used		LS		1	Sand In
Surface	8 3/4"	7"	548'	New		LS	84'		Υ
Coal									_
Intermediate 1	_	_							
Intermediate 2		,							
Intermediate 3						···			-
Production	6 1/4"	4 1/2"	2572.75'	New	J	J-55			N
Tubing									-
Packer type and de	epth set				•				
Comment Details	Circulated Est. 50	sks to surface on 7" sur	face cement job.						:
CEMENT DATA	Class/Type of Cement	Numbe of Sack	•	y g) (f	Yield t <sup>3</sup> /sks)	Volume (ft <sup>2</sup> )	Cen Top (	nent (MD)	WOC (hrs)
Conductor									· · · · · · · · · · · · · · · · · · ·
Surface	Reg Neat	130	15.6		1.18	153	Sur	face	8
Coal									
Intermediate 1									
Intermediate 2				-					
Intermediate 3									-
Production	50:50 Pozm	ix 150	14.2		1.27	191	67	72'	8
Tubing									
Plug back pro	tion penetrated cedure N/A	Berea		Loggers T Plug back					
Kick off depth Check all wire		a caliper	■ density ■ resistivity	deviat	ed/directi a ray		nduction emperature	□soni	c
Well cored  DESCRIBE To G Centralizers every 84 fm	HE CENTRAL	Convention  IZER PLACEM  Alizer placed mid string on 7				Vere cuttings			
WAS WELL (	COMPLETED	AS SHOT HOLI	E □Yes ■	No Di	ETAILS				
WAS WELL C	COMPLETED	OPEN HOLE?	□ Yes 💄 No	o DET	AILS _				
WERE TRAC	ERS USED	Yes A No	TYPE OF T	RACER(S)	USED				

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API 47- 043 \_ 03451

Farm name\_ALLEN, TERRY & DAWNA

\_Well number\_\_103

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	7/29/14	2338'	2348'	60	Berea
	· · · · · · · · · · · · · · · · · · ·				
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Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	7/29/14	4.5	1200	606	687		43	12 bbls HCL
			-					-
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Please insert additional pages as applicable.

Office of Oil & Gas

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API 47- 043	_ 03451	Farm	<sub>name</sub> ALLEN,	TERRY &	DAWNA	Well n	umber_	103	
PRODUCING 1	FORMATION(S	<u>S)</u> .	<u>DEPTHS</u>					F	Received
Berea			2338'- 2348'	_TVD _		MD		Office	of Oil & Gas
								UC	T <b>3 0</b> 2014
Please insert ad	ditional pages a	s applicable.				<u>- 1 (</u>			
	□ Build up □	•	□ Open Flow	(	OIL TEST 🗆	Flow $\Box$	Pump		
	SSURE Surfa						-	F TFST	hrs
OPEN FLOW	Gas mcf	Oil pd	NGL bpd	_ bpd				RED BY	□ Pilot
LITHOLOGY/	TOP	воттом	TOP	воттом					
FORMATION	DEPTH IN FT	DEPTH IN FT		DEPTH IN F	T DESCRIBE	ROCK TYP	E AND I	RECORD QU	JANTITYAND
	NAME TVD	TVD	MD	MD	TYPE OF FI	LUID (FRES	SHWATE	ER, BRINE, C	ML, GAS, H <sub>2</sub> S, ETC)
Sand/Shale	0	438	0						
Pittsburgh Coal	438	445							
Sand/Shale	445	1609							
Big Lime	1609	1814							
Big Injun	1814	1918							
Shale	1918	2314							
Coffee Shale	2314	2334		14					
Berea	2334	2354							
Shale	2354	2490							
TD	2490								
Please insert ad	lditional pages a	s applicable.							
Drilling Contra	ctor Decker Drill	ling							
Address 11565			City	Vincent		State	ОН	Zip 457	84
			City	and the state of t		State		_ Zip	
	any Weatherford	International							
Address 777 No	orth River Avenue		City	Weston		State	WV	_ Zip <u>264</u>	52
Cementing Cor	npany Universal	Services							
Address 5252 R			City	Allen		State	KY	Zip 416	01
Address			City	-		State		_ Zip	
Stimulating Co	mpany Produc	ers Service Co	rp.						
Address 109 So	uth Graham Street		City	Zanesville		State	ОН	Zip 437	01
Please insert ad	lditional pages a	s applicable.							
Completed by	Roger Heldman	1			Telephone	304-420-	1107		
Signature	1. Held	_	Title O	perations Mar	nager		Date 10	)/15/14	
Submittal of H	ydraulic Fractur	ing Chemical	Disclosure Info	rmation	Attach copy o	of FRACE	OCUS	Registry	
	,	0							

Prepared for: HG Energy Dustin Hendershot			Prepared by: Producers Service Corp Chris Bryan			
304 771 5432		PRODUCERS			109 S. Graha	m St.
		SERVICE CORP.			Zanesville, O	H 43702
		wastrom wast			740-454-6253	
INVOICE #:	16760				140-434-0233	
WELL NAME:	A. Griffith #103					
STATE & COUNTY:	Lincoln,WV					
TOWNSHIP/FIELD:	Griffthsville					
DATE of SERVICE:	7/29/2014					
CUSTOMER PO#						
Description		Notes	Amount	Units	Unit Cost	Total Cost
ACID PUMP CHARGE			1	EA	\$	
MILEAGE CHARGE P	ER UNIT ONE WAY	1 Unit @ 200 Miles	200	MI	\$	
IC ACID 15% ACID DELIVERY			500	GAL	\$	
PRO HIB II			0.5	HR GAL	\$	
PRO CLA FIRM LP			0.5		\$	
PRO NE-1			0.5		\$	
PRO PEN	*		0.5		\$	
DATA VAN			1	STAGE	\$	
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## State of West Virginia Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

API _	<sub>47 -</sub> 043	_ 03453	County LINCOL	N	District DUVAL		
_		ILLE 7.5'	•	IN GRIFFITH	Field/Pool Name GI	RIFFITHS	VILLE
					Well Number 105		
			H.G. ENERGY LL				
Address	5260 DuPC	ONT ROAD	City PAF	RKERSBURG	State WV	Zip 2	6101
Elevation	Landing Poin Bo (ft) 840'	nt of Curve N ttom Hole N	orthing 4,231,038 M orthing orthing Type of Well	I I ■New □ Existing	and deviation survey Easting 416,097 M Easting 7 Easting 7 Type of Report	□Interim	#Final
Permit Ty	/pe □ De	eviated   Ho	rizontal   Horizon	ntal 6A 📕 Vertica	l Depth Type	<ul><li>Deep</li></ul>	■ Shallow
Type of C	Operation □	Convert De	epen 🖺 Drill 🗆	Plug Back 🗆 R	edrilling 🗆 Rework	□ Stimulat	e
Well Typ	e 🗆 Brine 🗅	Disposal □ CBM	□ Gas □ Oil ■ Sec	condary Recovery	□ Solution Mining □ Sto	orage 🗆 O	her
Drilled w	ith □ Cable	e 🖪 Rotary	iple Fluids Produ  □ Mud ■Fresh Wa		as □ NGL ■ Oil ate hole ■ Air □ Mud		:
Production		ir 🗆 Mud 🗆	Fresh Water 📱 Brin				
		6/17/2013			14 Date drilling o	<u></u>	8/1/14
	=	- I.		<del>-</del>	activities ceased		· 
Verbal pl	ugging (Y/N	) <u> </u>	ate permission grante	d	Granted by		
Please no	te: Operator	is required to sub	omit a plugging applic	eation within 5 days	of verbal permission to p	lug	
Freshwat	er depth(s) f	t	N/A	Open mine(s) (Y/I	N) depths	N	
	r depth(s) ft	0001	1270'		ed (Y/N) depths	N	<u> </u>
	th(s) ft	1001	406'		ered (Y/N) depths	N	
Is coal be	ing mined in	area (Y/N)	N				
						Review	wed by:

## Office of Oil & Gas

OCT 3 0 2014

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Rev. 8/23/13									
API 47- 043	- 03453	Farm na	ame MCCLUF	RE, ANDY J	. & REBE	CCA Well	number_10	)5	-
CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft		Basket epth(s)		ent circulate (Y/N) de details below*
Conductor	12 1/4"	11 5/8"	30'	Used	1	LS			Sand In
Surface	8 3/4"	7"	506'	New		LS	84'		Y
Coal									-
Intermediate 1									
Intermediate 2			-						•
Intermediate 3			- "						-
Production	6 1/4"	4 1/2"	2482.7'	New		I-55			Y
Tubing	0 1/4	7 112			<del>                                     </del>				•
Packer type and de	epth set			ــــــــــــــــــــــــــــــــــــــ			<u> </u>		<del>- :</del>
Comment Details	Circulated Est. 10	sks to surface on 7" su	rface cement job. Cire	culated Est. 45 sl	s to surface or	n 4 1/2" cement jc	ob.		
CEMENT DATA	Class/Type of Cement	Number of Saci			Yield ft <sup>3</sup> /sks)	Volume (ft <sup>2</sup> )		nent (MD)	WOC (hrs)
Conductor									· 
Surface	Reg Neat	125	15.	.6	1.18	148	Sur	face	8
Coal									
Intermediate 1		<u>-</u>							
Intermediate 2									·
Intermediate 3									
Production	50:50 Pozm	ix 85/12	5 13.2/1	14.2 1.	64/1.27	139/159	1	2'	8
Tubing								-	
Drillers TD (ft Deepest forma Plug back pro	tion penetrated	Berea			ΓD (ft) <u>251</u> c to (ft) <u>N/</u>				
Kick off depth	(ft) <u>N/A</u>								
Check all wire	line logs run	■ caliper ■ neutron	density resistivity		ted/directi na ray		duction mperature	□soni	e
Well cored	Yes 🖪 No	Conventi	onal Side	ewall	W	ere cuttings	collected	■ Yes □	No No
DESCRIBE T	HE CENTRAL	IZER PLACEM	ENT USED FO	OR EACH C	ASING S	TRING			
WAS WELL O	COMPLETED	AS SHOT HOLI	E □ Yes 🖪	No D	ETAILS				
WAS WELL O	COMPLETED	OPEN HOLE?	□ Yes ■ N	No DET	`AILS _				
WERE TRAC	ERS USED	Yes Mo	TYPE OF T	TRACER(S)	USED _				

WR-35 Rev. 8/23/13

API 47- 043 - 03453

Farm name MCCLURE, ANDY J. & REBECCA Well number 105

### PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	8/6/14	2317'	2321'	24	Berea
1	8/6/14	2326'	2330'	24	Berea
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Please insert additional pages as applicable.

### STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	8/6/14	3.1	1051	1137	837		42	12 bbls HCL
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Please insert additional pages as applicable.

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Rev. 8/23/13 Farm name MCCLURE, ANDY J. & REBECCA Well number 105 API 47- 043 \_ 03453 PRODUCING FORMATION(S) **DEPTHS** Received Office of Oil & Gas 2317'- 2330' TVD MD Berea OCT 3 0 2014 Please insert additional pages as applicable. □ Build up □ Drawdown □ Open Flow **GAS TEST** DURATION OF TEST Surface psi Bottom Hole psi SHUT-IN PRESSURE Water NGL **OPEN FLOW** Gas Oil GAS MEASURED BY □ Pilot bpd □ Estimated □ Orifice bpd mcfpd bpd TOP **BOTTOM** LITHOLOGY/ TOP **BOTTOM** DESCRIBE ROCK TYPE AND RECORD QUANTITYAND DEPTH IN FT DEPTH IN FT DEPTH IN FT FORMATION DEPTH IN FT TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H2S, ETC) NAME TVD TVD MD 400 Sand/Shale 0 0 400 406 Pittsburgh Coal 406 1592 Sand/Shale 1800 Big Lime 1592 Big Injun 1800 1903 2294 Shale 1903 Coffee Shale 2294 2314 2334 Berea 2314 Shale 2334 2510 TD 2510 Please insert additional pages as applicable. Drilling Contractor Decker Drilling Address 11565 State Route 676 Zip 45784 Vincent State OH City Logging Company Weatherford International Address 777 North River Avenue Weston State WV City Zip 26452 Cementing Company Universal Services Address 5252 Rt 1428 Allen City Zip 41601 State Producers Service Corp. Stimulating Company Address 109 South Graham Street Zanesville State OH City Zip 43701 Please insert additional pages as applicable. Completed by Roger-Heldman Telephone Title Operations Manger Date 10/15/14

PERTE PONTA 105

Prepared for:

H G Energy LLC.

Rodger Heldman

INVOICE #: 16767

WELL NAME: A Griffith #105

STATE & COUNTY: Lincoln,WV

TOWNSHIP/FIELD: Griffithsville

DATE of SERVICE: 8/6/2014

CUSTOMER PO#

Description

Notes

Prepared by:
Producers Service Corp
Chris Bryan
109 S. Graham St.
Zanesville, OH 43702

**Total Cost** 

740-454-6253

**Unit Cost** Units Amount EA \$ ACID PUMP CHARGE 1000-2000 PSI MI 1 Unit @ 200 Miles Split 3 We 67 MILEAGE CHARGE PER UNIT ONE WAY 4 HR ACID DELIVERY 500 GAL IC ACID 15% \$ 0.5 GAL PRO HIB II 0.5 GAL PRO CLA FIRM LP 0.5 GAL PRO PEN \$ 0.5 GAL PRO NE-1 1 STAGE \$ DATA VAN TOTAL Customer Approval: \_\_\_\_\_

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## OCT 3 0 2014 State of West Virginia Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

API 47 - 043 - 03456 County LINCOL  Quad GRIFFITHSVILLE 7.5' Pad Name J.A. F  Farm name MCCLURE, ANDY J. & REBECCA  Operator (as registered with the OOG)  Address 5260 DuPONT ROAD City PAI	Well	Number 108	
As Drilled location NAD 83/UTM Attach an as-drilled Top hole Northing 4,234,455 M Landing Point of Curve Northing Bottom Hole Northing Northing Bottom Hole Northing Of Landing Point of Curve Northing Northing Northing Of Landing Point of Curve Northing Of Landing Point of Curve Northing Of Landing Point Of Landing Point Of Landing Point Of Landing Of	EastingEastingEastingEasting	Type of Report	rim Final leep Shallow mulate  Other
Data association and 6/17/2013 Data delling association	7/17/14	Deta Jaillian Jail	7/23/14
Date permit issued 6/17/2013 Date drilling community Date completion activities began 7/28/14  Verbal plugging (Y/N) N Date permission grante  Please note: Operator is required to submit a plugging applic	_ Date completion activities d G	ceased 7/29	0/14
Freshwater depth(s) ft	Open mine(s) (Y/N) depths Void(s) encountered (Y/N) Cavern(s) encountered (Y/N)	depths	N N Reviewed by:

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03456	Farm na	ame MCCLUR	E, ANDY J	. & REBE	ECCA Well	number_108	3	
Hole	Casing		New or	Grade				t circulate (Y/N)
Size		Depth		Т —	T	epth(s)	* Provide	details below*
								Sand In
8 3/4"	7"	759'	New	_	LS	84'	<u> </u>	<u>Y</u>
							<u> </u>	1
							<u> </u>	
							ļ	
				<u> </u>		_	ļ	
6 1/4"	4 1/2"	2716.75'	New	,	J-55			Y
·				<u> </u>				
epth set								
Circulated Est. 50	sks to surface on 7" su	face cement job. Circ	ulated est. 18 sk	s to surface o	n 4 1/2" cement jo	b.		
Class/Type of Cement					Volume (ft <sup>2</sup> )			WOC (hrs)
Reg Neat	180	15.6	3	1.18	212	Surfa	се	8
50:50 Pozm	nix 105/12	25 13.2/1	4.2 1.	64/1.27	172/159	59 110'		8
) 2720' tion penetrated cedure N/A	Berea							
(ft) N/A	<b>■</b> caliper	<b>≜</b> density	 ■ devia	ted/direct	ional <b>≜</b> in	duction	;	
ıYes ■ No		·	_			•	□sonic	No
					_			
		ENT USED FO	OR EACH C	ASING S	TRING			
, 001011 017 112 , 00110	amen protect that string off (							
							-	<del></del>
COMPLETED	AS SHOT HOLI	E □Yes ■	No D	ETAILS				
COMPLETED	OPEN HOLE?	□ Yes	lo DET	AILS _				
ERS USED 1	⊐ Yes ■ No	TYPE OF T	RACER(S)	USED _				
	Hole Size  12 1/4"  8 3/4"  6 1/4"  cpth set  Circulated Est. 50  Class/Type of Cement  Reg Neat  50:50 Pozm  2720' tion penetrated cedure N/A  (ft) N/A  line logs run  Yes No  HE CENTRAI om bottom on 4 1/2", Central completed	Hole Size Size  12 1/4" 11 5/8"  8 3/4" 7"  6 1/4" 4 1/2"  Class/Type of Cement of Sack  Reg Neat 180  Frequency of Sack  Reg Neat 180  50:50 Pozmix 105/12  10 2720'  tion penetrated Berea cedure N/A  (ft) N/A  line logs run acaliper neutron  1 Yes No Convention of Yes No Conventio	Hole Size Size Depth  12 1/4" 11 5/8" 30'  8 3/4" 7" 759'  6 1/4" 4 1/2" 2716.75'  cpth set  Circulated Est. 50 sks to surface on 7" surface cement job. Circulated Est. 50 sks to surface	Hole Size Size Depth Used  12 1/4" 11 5/8" 30' Used  8 3/4" 7" 759' New  6 1/4" 4 1/2" 2716.75' New  circulated Est. 50 sks to surface on 7" surface coment job. Circulated est. 18 sks.  Class/Type of Cement of Sacks wt (ppg) (18	Hole   Size   Size   Depth   Used   Wt/R	Hole   Size   Depth   Used   Wt/R   Depth   Used   Used	Hole   Size   Depth   Used   Will   Depth(s)	Hole Casing Depth Used W/Th Depth(S) Provide Size Size Depth Used W/Th Depth(S) Provide 12 1/4" 11 5/8" 30' Used LS 84' Provide 12 1/4" 11 5/8" 30' Used LS 84' Provide 13/4" 7' 759' Now LS 84' Provide 14 1/4" 11 5/8" Now LS 84' Provide 15 1/4" 4 1/2" 2716.75' New J-55 Potal Size Size Size Size Size Size Size Size

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API 47- 043 _ 03456	Farm name MCCLURE, ANDY J. & REBECCA Well number 108	

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	7/29/14	2574'	2588'	84	Berea
-					
L .					
	•				
-					

Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	7/29/14	5.2	958	1022	764		43	12 bbls HCL
	1							
								:
						-		

Please insert additional pages as applicable. Received

Office of Oil & Gas

Page 4 of 4 WR-35 Rev. 8/23/13 Farm name MCCLURE, ANDY J. & REBECCA Well number 108 API 47- 043 \_ 03456 **DEPTHS** PRODUCING FORMATION(S) Received 2574'-2588' Berea TVD MD Office of Oil & Gas OCT 30 2014 Please insert additional pages as applicable. □ Build up □ Drawdown □ Open Flow OIL TEST - Flow - Pump **GAS TEST** DURATION OF TEST SHUT-IN PRESSURE Surface psi Bottom Hole psi Water Oil NGL **OPEN FLOW** Gas GAS MEASURED BY □ Pilot bpd bpd □ Estimated □ Orifice mcfpd bpd LITHOLOGY/ TOP **BOTTOM** TOP **BOTTOM** DESCRIBE ROCK TYPE AND RECORD QUANTITYAND **FORMATION** DEPTH IN FT DEPTH IN FT DEPTH IN FT DEPTH IN FT NAME TVD MD MD TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H2S, ETC) TVD Sand/Shale 647 0 0 Pittsburgh Coal 647 652 Sand/Shale 1830 652 Big Lime 1830 2043 Big Injun 2043 2143 Shale 2143 2550 Coffee Shale 2572 2550 2588 Berea 2572 Shale 2588 2720 2720 Please insert additional pages as applicable. Drilling Contractor Decker Drilling Address 11565 State Route 676 Vincent OH Zip 45784 City State Logging Company Weatherford International Address 777 North River Avenue Zip 26452 Weston WV City State Cementing Company Universal Services Address 5252 Rt 1428 Zip 41601 Allen KY City State Stimulating Company Producers Service Corp. Address 109 South Graham Street Zanesville State OH Zip 43701 City Please insert additional pages as applicable. Completed by Roger Heldman Telephone 304-420-1107 Title Operations Manager Signature Date 10/14/14 Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

	9					
Prepared for:		应应			Prepared by	
HG Energy					Producers S	ervice Corp
Dustin Hendershot						ı
304 771 5432		PRODUCERS			109 S. Grah	am St.
		SERVICE CORP.			Zanesville,	OH 43702
					740-454-625	3
INVOICE #:	16761					
WELL NAME:	J.A. Fowler #108					
STATE & COUNTY:	Lincoln,WV					
TOWNSHIP/FIELD:	Griffthsville					
DATE of SERVICE:	7/29/2014					
CUSTOMER PO#						
Description		Notes	Amount	Units	Unit Cos	t Total Cost
ACID PUMP CHARGE			1	EA	\$	1.
MILEAGE CHARGE PE	ER UNIT ONE WAY	N/C 2nd Well Same Location	0		\$	
IC ACID 15%			500		\$	
ACID DELIVERY PRO HIB II	*		2		\$	
PRO CLA FIRM LP			0.5 0.5		\$	
PRO NE-1			0.5		\$	
PRO PEN			0.5		\$	
DATA VAN				STAGE		
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Customer Approval: \_

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WR-35 Rev. 8/23/13

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Page 1 of 4

# State of West Virginia Department of Environmental Protection - Office of Oil and Gas Well Operator's Report of Well Work

API 47 - 043 - 03457 County LINCO	DLN	District DUVAL		
Quad GRIFFITHSVILLE 7.5' Pad Name J.A.	FOWLER	Field/Pool Name GR	(IFFITHS	/ILLE
Farm name MCCLURE, ANDY J. & REBECCA		Well Number 109		
Operator (as registered with the OOG) H.G. ENERGY L		Province and a service service of the service		
Address 5260 DuPONT ROAD City P.	ARKERSBURG	State WV	Zip _2	6101
As Drilled location NAD 83/UTM Attach an as-dri Top hole Northing 4,231,299 M Landing Point of Curve Northing Bottom Hole Northing  Elevation (ft) 956' GL Type of Well Permit Type Deviated Horizontal Horizontal Type of Operation Convert Deepen Drill  Well Type Brine Disposal CBM Gas Oil S	Ea Ea Ea  New □ Existing  ontal 6A ■ Vertical  □ Plug Back □ Red	Asting 416,244 M  Isting Type of Report of Depth Type  Trilling □ Rework	□Interim ( □ Deep □ Stimulate	■Final  ■ Shallow
well Type   Brille Disposal     CBM     Gas   Golf	secondary Recovery	Solution Willing   Stor	age 🗆 Ott	
Type of Completion ■ Single □ Multiple Fluids Pro	duced □ Brine □Gas	s □ NGL 🛮 Oil	□ Other	
Drilled with □ Cable ■ Rotary				
Drilling Media Surface hole		ehole ≣Air □Mud	Fresh W	ater □ Brine
Date permit issued6/17/2013 Date drilling condition activities began 8/4/14  Verbal plugging (Y/N) N Date permission gran	Date completion ac	ctivities ceased	8/6/14	7/26/14
Please note: Operator is required to submit a plugging appl	lication within 5 days of	verbal permission to plu	ıg	
Freshwater depth(s) ftN/A	Open mine(s) (Y/N)	depths	Ν	
Salt water depth(s) ft 1040', 1140'		I (Y/N) depths	N	
Coal depth(s) ft 508'-513'		red (Y/N) depths	Ν	
Is coal being mined in area (Y/N)N		**************************************		
			Review	ed by:

## Office of Oil & Gas

OCT 3 0 2014

Page 2 of 4 WR-35 Rev. 8/23/13 API 47-043 Farm name MCCLURE, ANDY J. & REBECCA Well number 109 03457 Grade Basket Did cement circulate (Y/N) **CASING** Casing New or Hole **STRINGS** Size Depth Used wt/ft Depth(s) \* Provide details below\* Size Conductor 12 1/4" LS Sand In 11 5/8" 30, Used Surface 84' Υ 8 3/4" 7" 633' New LS Coal Intermediate 1 Intermediate 2 Intermediate 3 Production Ν 6 1/4" 4 1/2" 2544.05 New J-55 Tubing Packer type and depth set Comment Details Circulated Est. 50 sks to surface on 7" surface cement job. **CEMENT** Class/Type Number Slurry Yield Volume Cement WOC (ft ³/sks) (ft.3) Top (MD) DATA of Cement of Sacks (hrs) wt (ppg) Conductor Surface Surface 8 Reg Neat 150 15.6 1.18 177 Coal Intermediate 1 Intermediate 2 Intermediate 3 Production 50:50 Pozmix 100/125 13.2/14.2 1.64/1.27 164/159 433' 8 Tubing Drillers TD (ft) 2580' Loggers TD (ft) 2582 Deepest formation penetrated Berea Plug back to (ft) N/A Plug back procedure N/A Kick off depth (ft) N/A Check all wireline logs run acaliper density ■ deviated/directional induction ■ neutron **■** resistivity 🖹 gamma ray **■** temperature □sonic Well cored □ Yes ■ No Conventional Sidewall Were cuttings collected ■ Yes □ No DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING 6 Centralizers every 84 from bottom on 4 1/2°, Centralizer placed mid string on 7° WAS WELL COMPLETED AS SHOT HOLE □ Yes ■ No DETAILS WAS WELL COMPLETED OPEN HOLE? □ Yes ■ No DETAILS WERE TRACERS USED □ Yes ■ No TYPE OF TRACER(S) USED

age 3 of 4

API 47- 043 \_ 03457

Farm name MCCLURE, ANDY J. & REBECCA Well number 109

## PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	8/6/14	2413'	2426'	78	Berea
1				-	
-					
				-	
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Please insert additional pages as applicable.

## STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)	
1	8/6/14	3.3	1019	1205	816		42	12 bbls HCL	
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	Office of Oil Co.								

Please insert additional pages as applicable.

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Rev.	8/23/	13	

API 47- 043 - 03457 Farm name MCCLURE, ANDY J. & REBECCA Well number 109

PRODUCING I	FORMATION(S	5) .	<u>DEPTHS</u>								
Berea			2413'-2426'	_TVD			MD		Offi	Received ice of Oil &	
				_			_			OCT 3 0 2014	
Please insert ad	ditional pages a	s applicable.									
GAS TEST	□ Build up □	Drawdown	□ Open Flow		OIL TE	EST 🗆 F	low 🗆	Pump			
SHUT-IN PRE	SSURE Surfa	ace	_psi Botto	m Hole		_psi	DURAT	TION C	F TEST _	hrs	
OPEN FLOW	Gas mcf	Oil 	NGL bpd	bpd _					RED BY □ Orifice	□ Pilot	
LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN MD	FT DE				RECORD QUA	ANTITYAND IL, GAS, H₂S, ETC)	
Sand/Shale	0	508	0	MD		TE OF TE	OID (TRE	SIIWAI.	ER, DRIVE, O	IL, 0A3, 1123, L1C)	
Pittsburgh Coal	508	513									
Sand/Shale	513	1689									
Big Lime	1689	1900									
Big Injun	1900	1998									
Shale	1998	2390									
Coffee Shale	2390	2410									
Berea	2410	2429									
Shale	2429	2580									
TD	2580										
Please insert ad	lditional pages a	s applicable.									
Dailling Contro	ctor Decker Drill	ina									
Address 11565		9	City	Vincent			_ State	ОН	Zip _4578	34	
Logging Comp Address 777 No	any Weatherford	International	City	Weston			State	WV	Zip 2645	52	
Cementing Cor	mpany Universal	Services	Only				_ 5	***	Zip		
Address 5252 R	t 1428		City	Allen			State	KY	Zip 4160	)1	
Stimulating Co	mpany Produc	ers Service Co		Zanesville	_		State	ОН	Zip 4370	01	
	lditional pages a		City				_ State	-	Zip		
7-	Roger Heldman	4.4			Te	elephone	304-420				
Signature	for the	lan	Title O	perations Ma	ınager			Date 1	0/14/14		
Submittal of Hy	vdraulic Fracturi	ng Chemical	Disclosure Info	rmation	Attacl	1 copy of	FRACE	OCUS	Registry		

PEGLE JA Fowler) o

	1	L 11	~	- 17	
Prepared for:				Prepared by: Producers Serv	rice Corp
H G Energy LLC.				Chris Bryan	*
	PRODUCERS			109 S. Graham	St.
	SERVICE CORP.			Zanesville, OH	43702
Rodger Heldman	chastances anner a			740-454-6253	
INVOICE #: 16766					
WELL NAME: JA Fowler #109					
STATE & COUNTY: Lincoln, WV					
TOWNSHIP/FIELD: Griffithsville					
DATE of SERVICE: 8/6/2014					
CUSTOMER PO#					1
Description	Notes	Amount	Units	Unit Cost	Total Cost
ACID PUMP CHARGE 1000-2000 PSI		1	EA	\$	
MILEAGE CHARGE PER UNIT ONE WAY	1 Unit @ 200 Miles Split 3 We	67	MI	\$   \$   \$	
ACID DELIVERY		4	HR	\$	
IC ACID 15%		500 0.5		\$	
PRO HIB II		0.5		\$	
PRO CLA FIRM LP		0.5		\$	
PRO PEN		0.5		\$	
PRO NE-1 DATA VAN			STAGE		
2					
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				TC	

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Customer Approval:

PEGLE JA Fowler 109

			I	Prepared by:	_ 1	
Prepared for:				Producers Service Corp		
H G Energy LLC.				Chris Bryan		
				109 S. Graham	St	
	PRODUCERS					
Rodger Heldman	SERVICE CORP.			Zanesville, OH	43/02	
and the same of th				740-454-6253		
INVOICE #: 16766						
WELL NAME: JA Fowler #109						
STATE & COUNTY: Lincoln,WV						
TOWNSHIP/FIELD: Griffithsville						
DATE of SERVICE: 8/6/2014						
CUSTOMER PO#					T	
	Notes	Amount	Units	Unit Cost	Total Cost	
Description	Notes	Alliount			\$ 1 200 00	
ACID PUMP CHARGE 1000-2000 PSI		1	EA	\$ 1.200.00	\$ 1 3hh hh	
MILEAGE CHARGE PER UNIT ONE WAY	1 Unit @ 200 Miles Split 3 We	67	MI	H		
ACID DELIVERY		4	HR	H		
IC ACID 15%		500	GAL	H		
PRO HIB II		0.5	GAL GAL	-		
PRO CLA FIRM LP		0.5 0.5	GAL	1		
PRO PEN		0.5		1		
PRO NE-1			STAGE	4		
DATA VAN		1	STAGE	4		
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Customer Approval: